



A New Approach

- First, there is nothing technically wrong with Marc's code or approach
 - He is using approved methods & filling root-tuples in a very standard way
 - He is sampling a perfectly acceptable reduced dataset
 - Which is the purpose of the Common Sample Group
- However, there is always a "but"
 - The data needed for Marc's thesis is about 3 times larger than what was used for Moriond
 - To perform all the efficiency studies, Marc will need to add more variables to his root-tuple
 - Requiring another pass of the skimmed thumbnails
 - And another pass if he forgets something
 - And another pass if new TMB fixes come out



Athena Package

- A well-supported collaborative effort
 - J. Wittlin, S. Choi, M. Narain, etc.
 - They are also using the WZ em skim
 - All known fixes are applied to the thumbnails
 - Will migrate to TMBFix when it is ready
 - A much larger set of variables are available
 - One can perform just about all Electroweak analyses
 - Includes electrons, jets, vertexing, b-tagging, muons, MC
- Additional help is needed
 - More eyes looking at the package and the output
 - Someone(s) to take over the submission of jobs to CAB
 - Likely need to remake root-tuples every 2-3 months to add new variables or apply new fixes
 - Bookkeeping, file integrity
 - Monte Carlo
 - Disk Space
 - BU has two servers with 1 Tb of space, but more will be needed



Other Reasons to Change

- Minimize duplication of effort
 - Marc's root-tuple is only a subset of the Athena root-tuple
- Minimize competition for CAB resources
 - For the past week, Jodi and Marc have been 2 of top 5 CAB users
- Better starting point for James, and probably the other graduate students (and me)
 - I won't have to keep track of two or more c++ packages
 - Start working on efficiencies studies in parallel
 - Example root macro files exist
- Taking on the root-tuple processing (data & Monte Carlo) will be a good exercise and familiarize students with the variables, SAM, CAB, PBS, clued0, etc.
 - As well as the corrections when TMBFix is ready



Other Notes & Questions

- I would like to look at $Z p_T$ in the electron channel
 - Emily Nurse will perform measurement in the muon channel
- Jet reconstruction efficiency study is desired by many people - everyone looking at James
 - Who is supervising him? Should I take the lead?
- Before doing any b-tagging, Marc needs to measure the inclusive Z +jets cross section
 - The WZ em skim reports 118 pb^{-1} from Apr 19 2002 - 2 Jul 2003
 - Excluding Bad Runs and Bad LBNs
 - Including Jul 2 - 7 Sep 2003 data, there is about 160 pb^{-1}
 - Could one do a paper? If so, is that enough for a thesis?
- If Marc does a $Z^*/g \rightarrow ZH \rightarrow eebb$ measurement, then the data sample is probably limited to the pre-v12 trigger list
 - There is not enough time to do the additional efficiency studies and perform the b-tagging
- Has Mario and Tim been assigned to anything yet?